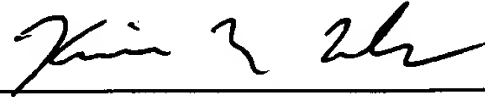


inventor did not initial or date this change, it is clear from the supporting documents that the use of the name "Paul Remier" was a typographical error.

Also attached is a Second Request for Certificate of Correction.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Agent for Applicant(s)

FORM PTO-1595

(Modified)

RECORDATION FORM COVER SHEET
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

EXECUTION DATE

Peter Reimer January 11, 2001
Pedram Sabouri January 11, 2001
Dennis R. Smith January 9, 2001

Additional name(s) of conveying part(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
Other _____

Execution Date: SEE ABOVE

2. Name and address of receiving party(ies):

Name: Applied Materials, Inc.Internal Address: Patent DepartmentStreet Address: P. O. Box 450AM/S #2061City: Santa Clara State: CA Zip: 95054Additional Name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent Number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

Serial No.: 09/505,580 Filing Date: February 16, 2000

B. Patent No.(s)

Additional Numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: PATENT COUNSELInternal Address: Applied Materials, Inc.Patent Dept.Street Address: P. O. Box 450AM/S 2061City: Santa Clara State: CA ZIP: 950526. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41) \$40.00
☐ Enclosed☒ Authorized to be charged to deposit account8. Deposit account number:
50-1074

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and any attached copy is a true copy of the original document.

Robert W. Mulcahy, Reg. No. 25,436
Name of Person Signing

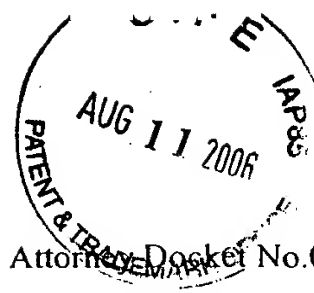
Signature

Date

10. Total number of pages comprising cover sheet, attachments, and document: 7

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with the required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231



Attorney Docket No.002981 / CPES/GREEN /DV

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

Peter REIMER*
905 Golden Way
Los Altos, CA 94024

Pedram SABOURI
2201 Monroe Street #905
Santa Clara, CA 95050

Dennis R SMITH*
6067 Paso Los Cerritos
San Jose, CA 95120

(hereinafter referred to as Assignors), have invented a certain invention entitled:

PROCESSING APPARATUS HAVING INTEGRATED PUMPING SYSTEM

for which application for Letters Patent in the United States was filed on 16FE2000, under Serial No. 09/505,580, executed on even date herewith; and

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, Inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest
 - (a) in and to said Application and said invention;
 - (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise;
 - (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and
 - (d) in and to each and every reissue of extension of any of said Patents.
2. Said Assignors hereby covenant and agree to cooperation with said Assignee to enable said Assignee to enjoy the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee

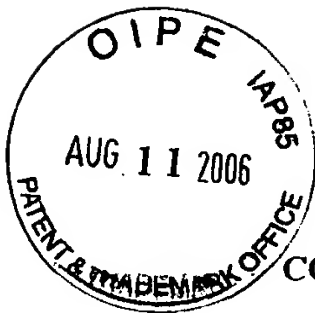
- a) for perfecting in said Assignee the right, title and interest here in conveyed;
(b) for prosecuting any of said applications;
(c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention;
(d) for filing and prosecuting applications for reissuance of any of said Patents;
(e) for interference or other priority proceedings involving said invention; and
(f) for legal proceedings involving said invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions, provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.
3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

Peter Reimer Date: 01/11/01
Peter REIMER* Employee No: 74062

Pedram SABOURI Employee No: 63734

Dennis R SMITH* Employee No: 85702



Atty. Dkt. No. AMAT/2981.P1/E CORE/CORE/MBE

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

This declaration is of the following type:

- original
- divisional
- continuation
- ☒ continuation-in-part

COPY

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROCESS APPARATUS HAVING INTEGRATED PUMPING SYSTEM

SPECIFICATION IDENTIFICATION

The specification of which:

- ☒ is attached hereto
- ☐ was filed on , under Serial No. , executed on even date herewith; or
- ☐ Express Mail No. (as Serial No. not yet known)
- and was amended on _____ (if applicable)
- ☐ was described and claimed in PCT International Application No. _____
- filed on _____ and as amended under PCT Article 19 on _____.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56,

and which is material to the examination of this application; namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

- ☐ In compliance with this duty there is attached an Information Disclosure Statement in accordance with 37 CFR §1.98.

PRIORITY CLAIM (35 U.S.C. §119)

I hereby claim foreign priority benefits under Title 35, United States Code, §119, of any provisional or foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below, and have also identified below any provisional or foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

☒ No such applications have been filed.

☐ Such applications have been filed as follows:

A. Prior foreign/PCT application(s) filed within 12 mos. (6 mos. for design) prior to this application, and any priority claims under 35 U.S.C. §119

<u>Country/PCT</u>	<u>Application No</u>	<u>Date Filed</u>	<u>Priority Claimed</u>
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

B. All foreign application(s), if any, filed more than 12 mos. (6 mos for design) prior to this U.S. application

Country:
Application No:
Filing date:

C. U.S. Provisional Application filed within 12 months prior to this application

<u>Serial No.</u>	<u>Filing Date</u>
-------------------	--------------------

PRIORITY CLAIM (35 U.S.C. §120)

I hereby claim the benefit under Title 35, United States Code, §120, of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information that is material to the examination of this application (namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

☐ No such applications have been filed

☒ Such applications have been filed, as follows:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Patented</u>	<u>Pending</u>	<u>Abandoned</u>
09/220,153	12/23/1998		X	

BEST AVAILABLE COPY

BEST AVAILABLE COPY

POWER OF ATTORNEY

I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Donald Verplancken	Registration No. 33,217
Michael B. Einschlag	Registration No. 29,301
Peter J. Sgarbossa	Registration No. 25,610
Lawrence Edelman	Registration No. 25,226
Michael L. Sherrard	Registration No. 28,041
Raymond Kam-On Kwong	Registration No. 37,165
James C. Wilson	Registration No. 35,412
Robert W. Mulcahy	Registration No. 25,436
Raymond R. Moser, Jr.	Registration No. 34,682
B. Todd Patterson	Registration No. 37,906
Keith M. Tackett	Registration No. 32,008
William B. Patterson	Registration No. 34,102

Send correspondence to:

Direct telephone calls to:

Patent Counsel
Applied Materials, Inc.
P.O. Box 450-A
Santa Clara, CA 95052

B. Todd Patterson
THOMASON, MOSER & PATTERSON
(713) 623-4844

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Sec. 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Peter

Full name of first inventor: PAUL REIMER

Inventor's signature: *Paul Reimer*

Date: *02/15/00*

Residence: Los Altos, California 94024

Post Office Address: 905 Golden Way
U.S.A.

Country of Citizenship: GERMANY

Full name of second inventor: PEDRAM SABOURI

Inventor's signature: *Pedram Sabouri*

Date: *2/15/00*


Residence: 2201 Monroe Street, #905

Post Office Address: Santa Clara, Clara 95050
U.S.A.

Country of Citizenship: IRAN

BEST AVAILABLE COPY

Full name of third inventor: Dennis Smith

Inventor's signature: 

Date: 2/15/00

Residence:

San Jose, California 95120

Post Office Address:

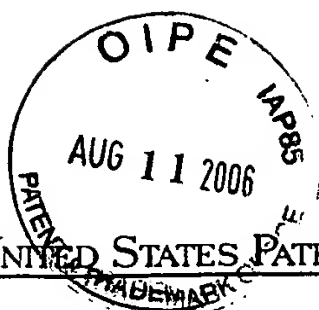
6067 Paso Los Cerritos

U.S.A.

Country of Citizenship: U.S.A.

(Declaration ends with this page)

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REC'D APR - 6 2001

UNITED STATES PATENT AND TRADEMARK OFFICE

NO CER
 COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/505,580 ✓	02/16/2000 ✓	2825	1224 ✓	2981.P1/Ecore/core/mbe ✓	17 ✓	41 ✓	5 ✓

CONFIRMATION NO. 5947

COPY

CORRECTED FILING RECEIPT



OC000000005929213

Patent Counsel
 Applied Materials, Inc. ✓
 P. O. Box 450-A
 Santa Clara, CA 95052

Date Mailed: 04/03/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Peter Reimer, Los Altos, CA; ✓
 Pedram Sabouri, Santa Clara, CA; ✓
 Dennis Smith, San Jose, CA; ✓

Domestic Priority data as claimed by applicant

THIS APPLICATION IS A CIP OF 09/220,153 12/23/1998 ✓

COMPUTER ENTERED
 APR - 6 2001

Foreign Applications

If Required, Foreign Filing License Granted 04/17/2000

Projected Publication Date: N/A

Non-Publication Request: No

Early Publication Request: No

Title

Processing apparatus having integrated pumping system ✓

Preliminary Class

438

Data entry by : DADE JR, THEODORE

Team : OIPE

Date: 04/03/2001



LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 36 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15 (b).

PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents
Office of Initial Patent Examination
Customer Service Center
Washington, DC 20231

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,817,377

Page 1 of 2

APPLICATION NO. : 09/505,580

DATED : Nov. 16, 2004

INVENTOR(S) : Peter REIMER, Pedram SABOURI, Dennis SMITH

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the Cover of the Patent

Item [75], Inventors: Change "Paul Reimer" to --Peter Reimer--

In the Specification

Column 1, Line 61: Change "vacuum-pumps" to --vacuum pumps--

Column 2, Lines 27-28: Change "conventional" to --conventionally--

Column 3, Line 35: Change "throughout" to --throughput--

Column 4, Line 44: Before "integrated", change "a" to --an--

Column 7, Line 27: Change "10²" to --10⁻²--

Column 7, Line 36: Change "additional" to --addition--

Column 8, Line 28: Change "Its" to --I/s--

Column 8, Line 49: Change "94" to "194"

Column 9, Line 14: Delete the comma after "the"

Column 9, Line 22: Change "65a" to --65a-c--

Table 1: Move "FORELINE" from the secondary heading of the last column to the primary heading of the last column

Table 1: Insert --Piping-- before "losses" in the secondary heading of the last column

Table 1, Column 5, Line 2: Change "3S" to --38--

Table 1, Column 3, Line 4: Change "SO" to --80--

Table 1, Column 3, Line 7: Change "300" to --100--

Column 10, Line 18: After "rather", change "that" to --than--

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Keith M. Tackett
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, TX 77056-6582

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,817,377

Page 2 of 2

APPLICATION NO. : 09/505,580

DATED : Nov. 16, 2004

INVENTOR(S) : Peter REIMER, Pedram SABOURI, Dennis SMITH

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 11, Lines 21 and 28: Change each instance of "10" to --110--

Column 11, Line 32: Change "ml/s²" to --m/s²--

Column 12, Line 10: Before "reducing", delete "to"

Column 13, Line 30: Change "pump" to --Pump--

Column 15, Line 32: Change "PT" to --P_i--

Column 15, Line 62: Delete "51"

Column 16, Line 9: Insert a period after "155"

Column 16, Line 33: Delete "id"

Column 18, Line 53: Change "370a,b" to --70a,b--

In the Claims

Column 19, Claim 1, Line 42: Delete "includes"

Column 19, Claim 3, Line 53: After "wherein", delete "each"

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Keith M. Tackett
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, TX 77056-6582

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.